

REMARKS

Claims 1-10 and 12 are pending in the present application after cancellation of claim 11. Claims 2, 3, 10 and 12 have been amended.

Applicant thanks the Examiner for indicating that claims 2-6 and 8 contain allowable subject matter. In response, Applicant has amended claims 2 and 3 to be in independent form and incorporate the limitations of the parent claim 1. Claims 4-6 and 8 depend from amended independent claims 2 and 3. Accordingly, claim 2-6 and 8 are now in allowable condition.

Claims 1, 7, 9-12 stand rejected under 35 U.S.C. §102(e) as being anticipated by United States Patent No. 6,785,600 B2 to Birk et al ("Birk"). For at least the following reasons, the anticipation rejection of pending claims 1, 7, 9-10 and 12 should be withdrawn.

To anticipate a claim, each and every element as set forth in the claim must be found in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). That is, the prior art must describe the elements arranged as required by the claims. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). It is respectfully submitted that Birk does not teach each and every limitation of pending claims 1, 7, 9-10 and 12, as explained in detail below.

Birk generally describes a torque control 11 calculating a setpoint fuel mass and a setpoint air mass solely from a setpoint torque. (Col. 3, Lines 35-38). Birk further describes two different operating modes: lean and rich. In a lean operating mode, i.e., for λ greater than 1, the torque produced largely depends on the injected fuel mass and not on the air mass supplied to the internal combustion engine or the resulting charging of the combustion chamber of the internal combustion engine. (Col. 3, l. 40-50). Only in a rich operating mode, i.e., for λ less than 1, does the air mass supplied to the internal combustion engine and, thus, the charge in the combustion chamber of the internal combustion engine play a fundamental role.

Birk describes torque variations or jerking that may occur in the transition from the lean operating mode to the rich operating mode. Birk generally describes controller 13 which

compensates for the torque difference between the setpoint torque and the actual torque by producing output variables that are combined with the setpoint fuel mass and the setpoint air mass. (Col. 3, Line 31 to Col. 4, Line 17). The influence of air mass in the transition to the rich operating mode is compensated for by the controller 13.

Birk fails to describe using a data model as recited in claim 1. First, there is simply no teaching or suggestion in Birk that the data model is used in “determining a variable expressing a target air-fuel ratio from a target torque and an air mass ascertained with the aid of one of a model and a measured value, and determining a setpoint fuel quantity to be injected into the combustion chamber,” as recited in claim 1. Second, there is simply no teaching or suggestion in Birk that the data model is used in “determining a setpoint air mass to be conducted to the combustion chamber from the target torque and the variable expressing the air-fuel ratio in the combustion chamber,” as recited in claim 1.

Since Birk does not disclose each and every feature of the pending independent claim 1, Birk does not anticipate independent claim 1 or its dependent claims 7 and 9. Therefore, it is respectfully submitted that pending claims 1, 7 and 9 are allowable over Birk.

Claims 10 and 12 recite features similar to the above-discussed features of claim 1. Accordingly, for at least the reasons stated above in connection with claim 1, Birk also does not anticipate claims 10 and 12. Therefore, it is respectfully submitted that pending claims 10 and 12 are allowable over Birk. Claim 11 has been cancelled, mooting the anticipation rejection of these claims.

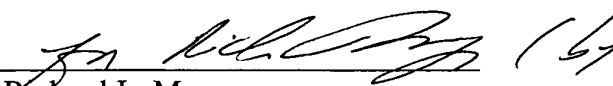
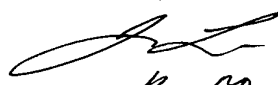
Claims 10-12 stand rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Claims 10 and 12 have been amended to recite statutory subject matters. Claim 11 has been cancelled, thereby rendering the non-statutory subject matter rejection of claim 11 moot.

CONCLUSION

It is respectfully submitted that all pending claims of the present application are in allowable condition. Prompt reconsideration and allowance of the application are respectfully requested.

Respectfully Submitted,
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